Pellegrinisaurus

Pellegrinisaurus (meaning *Lizard from Pelligrini*) is a genus of titanosaurian sauropod dinosaur that lived in South America during the Late Cretaceous period. The holotype was found in the Allen Formation, Argentina. [1]

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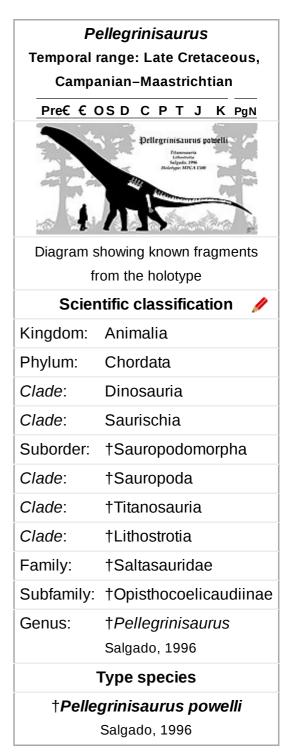
References

Discovery and naming

The assigned holotype, MPCA 1500, was discovered in 1975 by Roberto Abel and his assistant Jaime Emilio Powell. It was recovered from the lower member of the Allen Formation in the locality of Pellegrini Lake, Argentina, dating from the Late Cretaceous, Campanian to lower Maastrichtian, but it was not formally described until 1996 by Leonardo Salgado. Initially, the recovered remains were referred to *Epachthosaurus*, but later this hypothesis was abandoned because MPCA 1500 did not share derived features with the holotype of *Epachthosaurus*. The generic name *Pellegrinisaurus* refers to Pellegrini Lake, where the specimen was found. The specific name *powelli* is in honour of Jaime E. Powell.^[1]

Description

Pellegrinisaurus is a rather large <u>titanosaur</u>. The estimated body size is about 20–25 m (66–82 ft). The holotype includes an incomplete right <u>femur</u>, twenty-six caudal and four dorsal <u>vertebrae</u>. <u>Autapomorphic</u> features of *Pellegrinisaurus*, by which it can be distinguished, are:



- The ventral side of the centrum of the dorsals has a transverse width equal to twice the dorsoventral (vertical) depth.
- The mid-posterior and posterior caudals are anteroposteriorly (horizontally) elongated and have dorsoventrally depressed neural spines, the anterior ends of which are higher anteriorly than posteriorly.

Pellegrinisaurus differs from other titanosaurs by having anteroposteriorly elongate and dorsoventrally depressed mid-posterior and posterior caudal spines; Salgado interpreted this condition as an extra-articulation between the <u>neural spine</u> and the <u>articular process</u> of the subsequent vertebra, that reduced tail movement.^[1]

The right <u>femur</u> is partially preserved. It is anteroposteriously compressed with a very flattened fourth <u>trochanter</u>. Laterally, it features a pronounced bulge similar to that of <u>Chubutisaurus</u>, brachiosaurids and other titanosaurs.^[1]



Locality of Pellegrini Lake

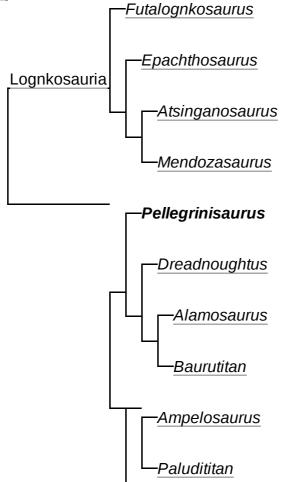
Paleoecology

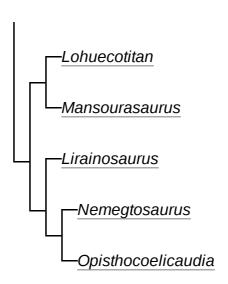
Pellegrinisaurus was unearthed from the <u>Allen Formation</u>, in which it probably lived alongside other titanosaurs, such as <u>Aeolosaurus</u> and <u>Rocasaurus</u>. Salgado suggested that contemporaneous <u>hadrosaurids</u> and the titanosaur <u>Aeolosaurus</u> inhabited coastal lowlands while other larger titanosaurs (such as *Pellegrinisaurus*) and theropods inhabited interior environments of the region.

Classification

Initially, Salgado placed *Pellegrinisaurus* as a possible <u>sister taxon</u> of the <u>Saltasaurinae</u>, in view of the build of its vertebrae.^[1] Later, during the description of <u>Mansourasaurus</u>, Sallam *et al.* (2017) published a complete phylogenetic analysis of the <u>Titanosauria</u> in which *Pellegrinisaurus* is found to be part of the clade Lithostrotia, in the Opisthocoelicaudiinae.^[3]

Opisthocoelicaudiinae





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